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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Uri Arkashevski

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EXAMINER

HOGAN, JAMES SEAN

ART UNIT

PAPER NUMBER

3752

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/531,979	Applicant(s) ARKASHEVSKI ET AL.	
	Examiner JAMES S. HOGAN	Art Unit 3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 260,261,263-278 and 286-291 is/are pending in the application.
- 4a) Of the above claim(s) 286-291 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 260,263-270 and 273-276 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/5,2/25,6/16</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's election without traverse of Group 1, claims 260-278 in the reply filed on July 11, 2008 is acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 260, 263, 266, 269, 270, and 275 are rejected under 35 U.S.C. 103(a) as being anticipated by U.S. Patent No 6,133,546 to Bains.
4. As per claim 260, Bain discloses (see figure 2) a system for de-icing windshields having a liquid reservoir (2). a vehicle surface liquid heating assembly (20) receiving a liquid from the liquid reservoir, the vehicle surface liquid heating assembly having a heat-conductive element (21), and a liquid heating enclosure (24) defining a liquid heating volume including a primary liquid heating volume portion (8) and a secondary liquid heating volume portion (22), separated by the heat-conductive element, the primary liquid heating volume portion including a heat exchanger (9) for directly heating liquid in the primary liquid heating volume portion and for indirectly heating liquid in the secondary liquid heating volume portion via the heat-conductive element, the heat-conductive element defining a cover, thus containing the primary liquid heating volume portion, and a heated liquid spray control subassembly (30-32) employing the vehicle

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surface liquid heating assembly and the vehicle surface liquid spraying assembly for providing a spray of heated liquid onto the vehicle surface (16).

5. As per claim 263 herein the enclosure defines a primary liquid flow pathway in the primary liquid heating volume portion and a secondary liquid flow pathway in the secondary liquid heating volume portion, the secondary liquid flow pathway supplying liquid (at (25)) to the primary liquid flow pathway.

6. As per claim 266, the primary liquid flow pathway is defined by the liquid heating enclosure (24) and by the heat-conductive element (21).

7. As per claim 269, the heat-conductive element has an aperture (at (25)) to permit liquid communication from the secondary liquid heating volume portion (21) to the primary liquid heating volume portion (8).

8. As per claim 270 the secondary liquid heating volume portion (21) includes at least one displaceable outer wall portion (24) providing freeze protection by virtue of its displaceability (Col. 4, line 38).

9. As per claim 275, the vehicle surface shown by all appearances in Figure 2 is a front vehicle windshield surface.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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11. Claims 264, 265, 267 and 268 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No 6,133,546 to Bains.

12. As per claim 264 and 268, Bains is silent as to the specific material that makes up the material of the primary liquid heating volume, that is, the conductive element, however, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected a highly heat conductive material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. See *in re Leshin*, 125 USPQ 416.

13. As per claim 265 and 268, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have had the material forming the primary fluids as being more heat conductive (metal) than that of the secondary fluid volume (plastic, or insulatory), since Bains teaches non-heat conductive properties (Col. 4, line 38).

14. As per claim 267, Bains is silent as to defining turbulent flow primary liquid flow pathway in any liquid heating volume portion, however, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have operated the apparatus of Bains so as to create turbulent flow, since the claimed invention and the prior art are not patentably distinguished. The apparatus of Bains is structurally is capable of creating turbulent flow via its pump (5) and therefore meets the claim.

15. As per claim 276, Bains teaches spraying onto a vehicle windscreen, but is silent as to the use of the heated spray onto a radar antenna surface, however, it would have

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been obvious to one having ordinary skill in the art at the time the invention was made, since the claimed invention and the prior art are not patentably distinguished. The apparatus of Bains is structurally is capable of spraying onto whatever surface is desired, and therefore meets the claim.

16. Claims 274 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No 6,133,546 to Bains in view of U.S. Patent No. 6,912,357 to Bissonnette et al.

17. The rejection of claim 273 above serves as the basis for the following. As per claim 273, Bains does not teach a heat exchanger defined by first and second conduits. Bissonnette et al teaches a fluid heater having first (100) and second (102) conduits, with their use with a windscreen cleaning system. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the apparatus of Bains with the two-conduit heat exchanger of Bissonnette et al in order to eliminate the use of electrical devices for fluid.

Allowable Subject Matter

18. Claims 261, 271, 272, 277 and 278 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure is as follows:

U.S. Patent No. 6,892,417 to Franco et al

U.S. Patent No. 7,051,799 to Wu et al

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U.S. Patent No. 7,190,893 to Kuebler et al

U.S. Patent No. 4508957 to Rocchitelli

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES S. HOGAN whose telephone number is (571)272-4902. The examiner can normally be reached on Mon-Fri, 6:00a-3:00p EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571)272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. S. H./
Examiner, Art Unit 3752

/Len Tran/
Supervisory Patent Examiner, Art Unit 3752